ISSUE 03

AGRIVIEW

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Minister's Message

Welcome to the April edition of Agriview.

As we prepare for spring seeding, our thoughts turn to the crop year ahead. As farmers, we continually play the game of agricultural roulette, hoping for just that right amount of sunshine and moisture, late frost and good prices at the end of it all.

Of course, no one needs to be reminded that, even with the right weather conditions, other factors can diminish returns in the field, and our bottom line.

In 2007, the Saskatchewan Crop Insurance Corporation paid out more than $1 million to farmers in the southwest region of the province, due to damage caused solely by Richardson's ground squirrels. This year, we have included gopher damage as a permanent feature of Crop Insurance under both the establishment benefit and yield-loss components of the multi-peril insurance program. As promised in the Saskatchewan Party election platform, we will review the entire Crop Insurance Program in 2008. The results of the review will be considered for development of the 2009 program.

Recently, I also announced more than $380,000 in research funding to address the widespread infestation of gophers in this province.

The research includes several projects in the southwest region of the province, where gopher damage is extensive, and will begin this spring and continue through 2010.

The primary goal of this project is to find a long-term, sustainable solution to gopher infestation. Research will focus on analyzing the effectiveness of new products and methods for gopher control.

The Pest Management Regulatory Agency (PMRA) emergency registration certificate for the use of liquid strychnine by farmers and ranchers in designated areas of the province is due to expire on July 31, 2008. Our research project will also examine the severity of current gopher infestations and will be an integral part of our application for the extended use of strychnine past the July 31, 2008 deadline.

The Province is partnering with other levels of government on the project. To date, 164 RMs have pledged an additional $82,000 to this research. I truly appreciate their dedication to resolving the gopher situation and I look forward to working together to find a new, dependable solution. We will also be working with the PMRA and the federal government on this project.

This research will be very valuable to the farming and ranching community, and to my Ministry, as we move forward to quickly and effectively address this situation and grow our industry.

I urge producers to contact their rural municipality regarding all control measures available for Richardson's ground squirrels, and encourage you to contact my Ministry with any questions you may have.

I wish you a very prosperous growing season ahead.

Sincerely,

Bob Bjornerud

Honourable Bob Bjornerud

Minister of Agriculture

2008-06074/

STORY SNAPSHOTS

Seeding Pulse Crops

Vaccinating cows for BVD

Consumer trends and retail

Obsolete Pesticide Collection Program

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Cover: Winter wheat
Credit: Ducks Unlimited.

Saskatchewan Ministry of Agriculture

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To view this publication online, visit www.agriculture.gov.sk.ca/programs-services.

Swath Grazing

by Andre Bonneau, BSA, PAg
Forage Conversion Specialist,
Agriculture Knowledge Centre

It's a novel idea: instead of putting in a cereal crop for swath grazing, why not cut hay regrowth or save a hay field for swath grazing? How about leaving a pasture for swath grazing?

The idea is very similar to stockpile grazing except the forage is laid into swaths. Cattle tend to do better on swathed forage because the forage is easier to find. In high snowfall areas, some animals may find it difficult to find a good mouthful of forage under the snow and this may cause some distress. Swath grazing perennials is also a good way to increase forage utilization over stockpiled forages.

When to cut

The best time to cut the forage is after a good fall frost. The crop will quickly become dormant diminishing the risk of winterkill, especially if alfalfa is in the stand. You're also swathing the forage before the plants start to deteriorate and quality is lost. Once the forage is in the swath, the quality is quite well protected.

Grazing

It's important to ensure the cattle are utilizing as much of the swathed crop as possible. If a large amount of material is left behind, it can interfere with regrowth of some forage species. Provide feed for three to five days at a time and do not move the animals until you're satisfied the swaths are cleaned up.

Conclusion

Swath grazing perennials is uncommon in many parts of the province. Some producers have used it and others are seriously considering it. While adding some cost to winter feeding, swath grazing perennials can provide better utilization of forage than stockpiled grazing, especially in years of high snowfall.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377.

SEEDING PULSE CROPS

by Patrick Mooleki, PhD, PAg
Crop Development Specialist
Agriculture Knowledge Centre

Seeding can be a stressful time for producers, which may result in missing important steps. The following information highlights the important aspects of seeding pulse crops.

Get a germination test: Seed should be tested for germination, seedling vigour, and disease. Seed lots with poor germination will result in poor crop stands and will require a higher seeding rate to compensate for low germination. Seedlings low in vigour take longer to emerge, are more prone to infection by soil-borne diseases, and have poor utilization of nutrients and water. Pulse seed lots with high disease ratings (especially for Ascochyta and Anthracnose) should be avoided.

Plan to seed early: Lentil, pea, and desi chickpea crops can be seeded early (late April to early May) as long as the average soil temperature in the seedbed has reached 5°C. Kabuli chickpeas should be seeded mid-May when the average soil temperature of 10°C has been reached. Dry beans should be seeded in late May when frost risk is low, and the average soil temperature at seeding depth has reached a minimum of 12°C. These guidelines are not a guarantee that early seeded crops will survive any late spring frost, but lentils and peas can often rebound from a frost.

Aim for optimal plant population: Recommended number of plants per square foot are as follows: lentils - 12; peas - eight; dry beans - three (irrigated) and four (dryland); and chickpeas - four. Take into consideration seed size as given by 1,000 kernel weight (TKW) in grams, as well as percentage survival based on germination and seedling vigour tests.

Seeding rate (lb./ac.) = [Plants/ft2 x TKW g x 10 ÷ (% Survival)]

Treat your seed: Fungicide seed treatments help protect seed and seedlings against certain seed-borne and soil-borne diseases. Seed treatments are necessary for chickpeas, sometimes a benefit for lentils, and not usually required for pea seed. For more information on pulse seed issues, refer to visit www.agriculture.gov.sk.ca and click on Production | Crops-Diseases | Guidelines for Seed-Borne Diseases of Pulse Crops.

Inoculate: Ensure that the inoculant you purchase is recommended for the pulse crop you are planting. Rhizobia (nitrogen fixing bacteria) are sensitive to some seed-applied fungicides. When using a combination of fungicide and inoculant, consult inoculant product labels and company compatibility fact sheets for the various methods fungicides can be applied to pulse crops.

Remember to fertilize: Although pulses fix nitrogen, this does not happen immediately. Soils extremely low in nitrogen may benefit from a small amount of starter nitrogen. Generally, this is provided by applying monoammonium phosphate (11:52:0) at the recommended rate for phosphorus. Soil tests will help determine how much phosphorus, potassium and sulphur your pulse crop requires.

Consider herbicide residues: Check your herbicide field history. Refer to the Saskatchewan Guide to Crop Protection at www.agriculture.gov.sk.ca for information on re-cropping restrictions. Also check product label for details.

FOR MORE INFORMATION

- Call the Agriculture Knowledge Centre at 1-866-457-2377.

Pre-seeding burn-off of weeds

by Clark Brenzil
Provincial Weed Control Specialist
Crop Development Branch

Historically, one of the major roles of tillage was to remove weeds from the field prior to planting, as well as loosening the ground to help plant the seed. In today's prairie agriculture, direct seeding equipment is designed to place seed accurately in undisturbed soils. Pre-seeding and pre-emergent herbicides are available to manage the weeds, thereby making tillage a thing of the past.

Producers have a wide selection of herbicides available for pre-seeding or pre-emergent use that control a broad range of weeds. Most of these use glyphosate as a foundation, and add other herbicide components to increase activity on certain weeds. Glyphosate is very effective on its own at controlling a wide range of grass and broadleaf weeds. There are some weeds, however, that are more tolerant and require higher rates of application, which increases the cost. Mixing another herbicide with glyphosate is also a way to protect against the development of resistance in weeds to glyphosate.

Glyphosate labels list several products that can be mixed with it in various situations, including 2,4-D, MCPA, bromoxynil (Pardner), dicamba, and Express. Dicamba and 2,4-D have been shown to improve the mobility of glyphosate in perennial broadleaf weeds, but 2,4-D mixed at high rates with glyphosate has also been shown to reduce perennial grass control compared to the same rate of glyphosate alone.

A new herbicide active for burn-off called carfentrazone is found in CleanStart, a recently registered herbicide. CleanStart combines carfentrazone (Aim) with glyphosate to provide rapid drydown of annual weeds.

PrePass is a pre-packaged combination of glyphosate and florasulam, the active ingredient in Frontline products. As with the glyphosate plus Express mix, the benefit of PrePass is a high level of control of dandelion and tougher to control winter annuals.

The next direction for burn-off applications will be to combine herbicides with soil activity in the burn-off to provide both burn-off preseed and in-crop weed control in one pass. Two emerging herbicides that will likely be used in this way are sulfentrazone (FMC) for chickpeas and flax, and PrePare (Arysta) for wheat.

For the best yield response, research is showing that the earlier the burn-off application is made in the spring, the more effective it is for protecting yield potential of the crop, even if seeding occurs later in spring.

FOR MORE INFORMATION

- Call the Agriculture Knowledge Centre at 1-866-457-2377.

Spray drift precautions

by Dale Risula
Integrated Cropping Management Specialist
Agriculture Knowledge Centre

Soon producers will be preparing for seeding and, along with that, pest control considerations. These are essential requirements in conventional farming operations for good crop production.

Because of specific criteria impacting producers' decision making processes, there are more variations in crop rotations than there has been previously. Some criteria include: the diversity of crops grown in Saskatchewan, crop stock to use ratios and economic forecasts, current environmental conditions, long-range weather forecasts and producer abilities. These all contribute to greater risks with respect to pesticide management and application.

Improper application of pesticides could lead to spray drift and the contamination of non-target sites. Spray drift on non-target crops can reduce the affected crop's productivity and marketability. Drift can be reduced through management of factors such as: wind speed and direction; sprayer operating pressures; water volume; pesticide volatility; hot, dry, calm conditions; boom height; sensitivity of crops; buffer zones; and specialized equipment such as low drift nozzles and air assisted sprayers. All these factors can have an impact on whether or not there will be any spray drift damage. Keeping a checklist of these criteria can help ensure all factors have been taken into account.

Spray operations are usually constrained with respect to application time. Unfavourable weather conditions can create a lot of stress for producers regarding the proper time frame for applying pesticides. However, taking unnecessary risks may create other problems, such as litigation, if damages result in non-target crops.

Producers should also know the risks associated with going outside of those parameters. Following a well planned spraying regime can help lessen potential problems associated with pesticide application.

Producers can develop their own checklists from the information printed in the 2008 Guide to Crop Protection (Avoiding Spray Drift), which is available online at www.agriculture.gov.sk.ca. Click on Production | Crops - Overview.

FOR MORE INFORMATION

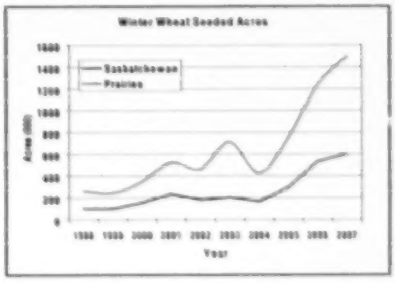
- Contact the Agriculture Knowledge Centre at 1-866-457-2377.

Winter Wheat – an increasing trend

By Blaine Recksiedler MSc, PAg
Cereal Crop Specialist
Crop Development Branch

Winter wheat is establishing a positive production trend on the prairies.

There are many reasons for the increased interest, such as marketing opportunities in food, feed and ethanol markets; yield advantage; less pesticide use; and spreading out the workload and production risks.



Since winter wheat develops earlier in the summer than its spring cousin, the risk of serious damage caused by pests such as fusarium, wheat stem sawfly and wheat midge, is lessened. In some years, these pests are essentially avoided due to the earlier timing of development.

Variety development has also played an integral role in the advancement of this crop. Older varieties had rust and lodging issues. However, the winter wheat breeding program at the Crop Development Centre at the University of Saskatchewan has made great strides to address these and other agronomic issues. Rust resistance, winter hardiness and shorter straw with improved lodging resistance, in combination with advancements in direct seeding, has allowed producers the opportunity to apply management strategies to maximize the winter wheat advantage.

Spring assessment

Since the winter crop may need time to recover from the winter months, growers often postpone the assessment until the majority of spring seeding is completed. Brown leaves may not mean winterkill, and conversely, green leaves may not mean that the crown survived the winter. The best indicator of survival is new white root growth from the crown tissue. If in doubt, producers can sample the worst areas, which are generally the windswept headlands, by removing plants on a warm day, and placing them on a moist paper towel in a warm room that is exposed to light for at least part of the day. Crowns that have survived will produce new white root growth.

Planning for next year?

Producers can start their 2008 winter wheat seeding plans now. Select spring crops that will allow for seeding winter wheat in the optimal window August 25 to September 15. Fields will require an adequate amount of standing stubble, which will provide the necessary snow-catch to enhance winter survival.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit www.usask.ca/agriculture/plantsci/winter_cereals. This website includes the Top Ten Reasons to Grow Winter Wheat, the Winter Wheat Production Manual and the Winter Cereal Survival Model.

EVALUATION OF ALFALFA WINTER INJURY

by Michel Tremblay
Provincial Specialist, Forage Crops
Crop Development Branch

Although alfalfa is a hardy crop well-suited to Saskatchewan growing conditions, it can be damaged by low winter temperatures. Diseases such as crown rot can exasperate the effects of cold temperature on alfalfa, causing a reduction in yield and longevity.

Low temperature injury to alfalfa

Crown rot, a fungal disease, is common across Western Canada. Infection by crown rot is most common in plants with mechanical injuries, insect damage, winter injury or nutrient deficiency. Symptoms include dark brown areas that appear on plant buds or stems that spread down to the crown. Brown, V-shaped dry rot occurs in the crown, which can extend into the taproot. Destruction of bud and crown tissue reduces new stem formation and weakens plants.

Winter crown rot occurs in northern areas of Western Canada, and is destructive in years of prolonged, deep snow cover. It develops under the snow in winter and early spring, and causes injury at temperatures just below 0°C. Winter crown rot causes crown tissue to turn brown-black and soft. Fluffy white or pinkish mycelium can be seen immediately after snow melt in spreading, circular patches, but dries down to an inconspicuous brown layer when snow cover disappears.

Inspection in late April to early May allows for early detection of winter injury and disease damage, and subsequent reseeding plans can be made if necessary. Severely affected plants do not initiate growth in the spring, or re-grow unevenly. Producers can sample exposed knolls and low spots to get a representative status of the field. Examine the crown buds, the root and crown, and the outer layers of the roots. Healthy roots are firm and white; healthy buds are white, rigid and sometimes pink-tipped. Diseased buds are soft, dark in colour, and shrivelled. Damaged plants have dark brown or yellow, watery tissue, and the outer layer of the root peels away easily.

Winter injury and disease in alfalfa can be reduced by a combination of the following factors: ensuring adequate soil fertility; avoiding harvest between August 15 and the first hard frost; using disease-resistant cultivars; and using effective snow trapping techniques. Winter injury and crown rot can cause plant mortality and stand thinning, reducing yields and increasing the risk of weed infestations. If plant populations are less than two to three plants per square foot, reseeding of the field should be considered.

Identification of alfalfa diseases can be obtained by submitting samples, along with a Crop Protection Diagnostic Form, to the Saskatchewan Agriculture Crop Protection Laboratory, Crop Development Branch, c/o Rm. 125, 3085 Albert St., Regina, S4S 0B1. The Diagnostic Form is available on the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca under Crop Protection Laboratory Services, or by contacting the Agriculture Knowledge Centre by phone at 1-866-457-2377, or by e-mail at agriinfo@agr.gov.sk.ca.

FOR MORE INFORMATION

- Contact Michel Tremblay, Forage Specialist, Crop Development Branch, at (306) 787-7712.

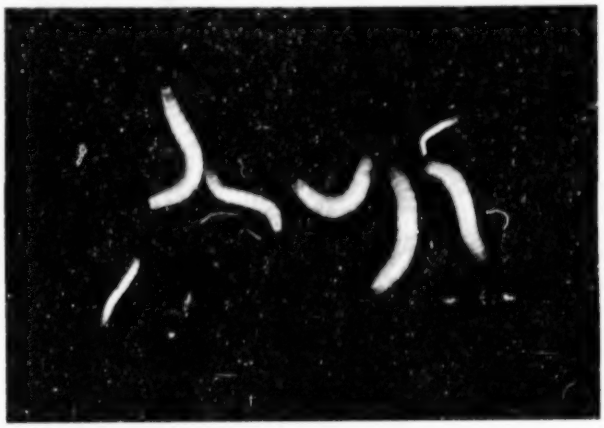
Insect management with seed treatments: flea beetles and wireworms

by Scott Hartley
Provincial Specialist - Insect/Pest Management
Crop Development Branch

Some of the early crop insect pests encountered by Saskatchewan producers can be effectively controlled through the use of seed treatments. For flea beetles, foliar insecticides provide an alternative control method, but in the case of wireworms, a seed treatment is the only viable control option.

Wireworms

Wireworms are the immature stage of "click" beetles, and can exist in a developmental larval stage in the soil for a number of years. It is the insect in its immature stage that causes the damage to plants.



Larval wireworms and adults

During the growing season, wireworms move up and down in the soil in response to temperature and moisture conditions. Wireworms tend to be more prevalent in cool moist soil and are attracted to the carbon dioxide produced by germinating seedlings. In the heat of the summer, wireworms migrate deeper so are less likely to be a problem. As the plants develop more vegetative tissue, they are more capable of tolerating wireworm feeding. Eventually, the life cycle of the wireworm will continue with a pupal stage and ultimately, adult beetles will emerge and may be found above ground.

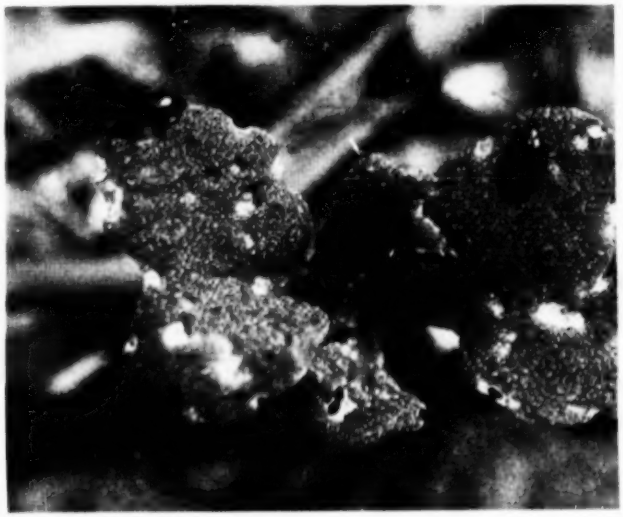
Younger wireworms are pale white in colour and later instar larvae appear more yellowish brown with a thickened, leathery external texture. Although they tend to be found most commonly in cereal crops, they can also be found feeding on broadleaf crops including canola, lentil, chick pea and potatoes.

Plant damage is observed usually before the insects are noted. Wireworms tend to shred the seedling below the soil surface resulting in wilting plants and eventual mortality of the seedlings.

Thiamethoxam, the active ingredient in Cruiser, is currently the only registered seed treatment for control of wireworms. It can only be applied by commercial seed treaters with closed system facilities.

Flea beetles

Flea beetles over-winter as adults in vegetative debris and shelterbelts, and feed on emerging canola in the spring. Populations were greatly reduced in the cooler, moist years of 2004 and 2005, but are once again increasing, particularly where warm, drier conditions have occurred in southern regions of the province.



Flea beetle feeding on Canola

Current control options for flea beetles include both seed treatments and foliar sprays. The use of a seed treatment containing an insecticide component is usually a good strategy if high flea beetle populations are expected. The insecticide is systemic, growing within the plant, providing protection from flea beetle feeding. Foliar sprays may be warranted if flea beetle feeding pressure exceeds the action threshold whether the seed has not been treated or seedlings are exposed to severe or prolonged periods of intense attack.

Current seed treatments do not exhibit repellency to flea beetles, and the mode of action requires the insecticide to be ingested when feeding occurs on the young seedlings. Economic or control decisions involve an estimate of plant damage that is greater than 25 per cent of the plant tissue consumed or destroyed. Field scouting for flea beetles is important, particularly on hot, calm days. Producers need to realize that a certain level of visible damage will occur before becoming economically significant.

FOR MORE INFORMATION

- See the **2008 Guide to Crop Protection**, a publication of the Saskatchewan Ministry of Agriculture. The guide is available on the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca, under Production | Crops-Insects, and in hard copy by contacting the Agriculture Knowledge Centre at 1-866-457-2377.

Pea leaf weevils – new pest in 2007

by Scott Hartley
Provincial Specialist - Insect/Pest Management
Crop Development Branch

The pea leaf weevil is a new pest of pea crops. It was reported in Saskatchewan in late May 2007, after migrating eastward from southern Alberta, where the insect was first reported in 2001.

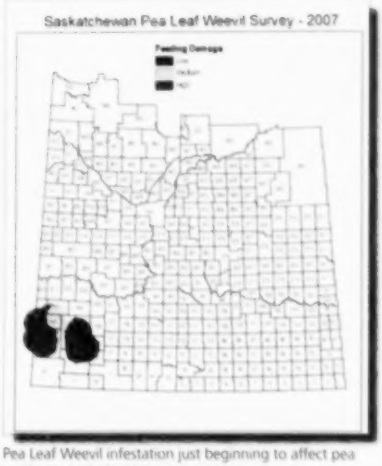
Weevil feeding damage on pea foliage is distinctive with scalloping of the leaf margins.

Damage from adult feeding on the leaves is destructive to seedling plants. The effect of larval feeding on root nodules is currently being studied by Agriculture and Agri-Food Canada (AAFC) scientists in Lethbridge. The reduction in the nitrogen fixing capability of the plant is of concern as there will be an effect on yield.

Damage to leaves is the best way to determine economic levels.

The only foliar insecticide currently registered is Matador. Since the mode of action of Matador is primarily through contact, application should be made in the evening, although good results can be achieved during the day if temperatures are between 10° C and 25° C. Preliminary results from trials in southern Alberta have shown good results in controlling the weevil with foliar insecticide application.

Alberta Agriculture and the Saskatchewan Ministry of Agriculture have received an Emergency Registration for Cruiser (active ingredient: thiamethoxam), a seed treatment that must be applied prior to planting. Research by Syngenta, Alberta Agriculture and AAFC in heavily infested areas of southern Alberta will continue in 2008 to acquire full registration for Cruiser in pea crops.



Pea Leaf Weevil infestation just beginning to affect pea producers in Saskatchewan.

FOR MORE INFORMATION

- See the **2008 Guide to Crop Protection**, a publication of the Saskatchewan Ministry of Agriculture. The guide is available on the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca *under Production | Crops-Insects, and in* hard copy by contacting the Agriculture Knowledge Centre at 1-866-457-2377.

SOIL TESTING: A CROP MANAGEMENT TOOL

by Ken Panchuk, PAg
Provincial Soils Specialist
Crop Development Branch

Soil testing is the best way to achieve balanced plant nutrition that optimizes yield and quality.

It's also a valuable tool for crop planning and management.

Conducting soil tests on a regular basis helps to determine crop needs for the next growing season, and monitors changes in soil nutrient levels and other soil characteristics over time. Soil testing also guides nutrient management program development to meet long-term crop needs while helping to protect the environment.

Soil testing is the simplest and most effective tool for determining your nutrient requirements. Achieving a realistic yield goal is dependent upon knowing the amount of plant available soil moisture plus an estimate of the growing season rainfall. Once the realistic yield is determined, and the level of available nutrients is determined by analysis of the representative soil sample, then nutrient recommendations can be made.

Soil testing near Regina, SK.

Soil test laboratories measure the amount of nutrients available for crop uptake at a given point in time or determine a nutrient supply rate, as is the case with root simulator technology. The labs take the information from the soil analysis and make a nutrient recommendation based on a selected crop, yield target, estimated plant available water, geographic location and cropping history.

Understanding the different analysis techniques and recommendation philosophies between soil test labs is important when choosing a lab. Additional factors include level of service desired, price and convenience.

Accurate recommendations require accurate soil samples. Getting a truly representative sample for each field should be the main focus in soil sampling. Commonly, samples are taken in random locations across the field (random sampling), or from a smaller area of the field considered typical (benchmark sampling). Geo-referencing the sampling locations with GPS is another tool that is currently used in soil testing today. All methods are effective if soil samples are taken from areas that best represent the field.

Saskatchewan producers have access to a number of excellent soil testing labs in the province. Obtaining a representative soil sample and having it analysed by the lab of your choice is an important first step in optimizing your fertilizer budget and economic returns.

FOR MORE INFORMATION

- Visit www.agriculture.gov.sk.ca under Crops-seeding | Stubble Subsoil Moisture Map; or
- Phone the Agriculture Knowledge Centre at 1-866-457-2377.

Planning a rotational grazing program

Christy Winquist, BSA, PAg
Beef-Forage Specialist
Agriculture Knowledge Centre

and

by Andre Bonneau, BSA, PAg
Forage Conversion Specialist
Agriculture Knowledge Centre

A grazing system is meant to manage periods of grazing and provide periods of rest. Grazing systems are designed to distribute livestock more uniformly, provide adequate rest, and maintain a healthy plant community while optimizing livestock gain per acre.

Understanding the growth cycle of grasses is important in designing a grazing system. To help maximize carbohydrate stores, defer grazing until after the four-leaf stage, keep grazing periods short during times of rapid growth, leave adequate leaf area for the plant to recover, and allow enough time for the plant to recover its carbohydrate stores before winter.

There are many different types of systems, and not every system will work for every operation. The system must be able to work with what is available. For example, water location will greatly affect the number of paddocks, as well as fence locations. What your water situation is and what you are willing to do with it will depend on how your system develops.

The type of system that is best for your operation will depend on what types of grasses are present. There are significantly different management practices for native grasses compared to tame grasses. For native-based systems, you may want to delay grazing in the spring in at least one year of the rotation. If the paddock was grazed early the year before, you will want to delay grazing in the subsequent year to allow that paddock time to recover. A full year of rest is also a good idea to include in the system, as it allows the plants a full growing season to recover.

Tame species can complement native ranges in a grazing system. Grasses that start growing early in the season can help delay grazing native grasses until later in the season. Grasses such as crested wheatgrass, meadow brome and Russian wildrye are examples of a few that work well with native grasses in a rotation.

How complex a system is depends on each individual manager, and his/her level of involvement and time. A good system will alternate periods of grazing with adequate periods of rest, resulting in a balance of forage and beef production.

FOR MORE INFORMATION

- Call the Agriculture Knowledge Centre at 1-866-457-2377.

DISTILLER GRAIN PRODUCTS FOR CATTLE ON PASTURE

by Murray Feist
Ruminant Nutrition Specialist
Agriculture Knowledge Centre

Wheat-based distiller grains are created by the ethanol process. This product will soon be available in larger quantities to Saskatchewan beef producers. The feedstuff will be available in either a dry or wet form.

Wet distiller grains with solubles is a mixture of wet distiller grains combined with concentrated dissolved solids. It generally has 65 to 70 per cent moisture content. The dried product contains approximately 10 per cent moisture, and is similar to barley with respect to handling and trucking characteristics.

The nutritional profile of distiller grains will vary depending on grain source and process. Research conducted at the University of Saskatchewan illustrates that the nutrient profile of wheat-based distiller grains plus solubles contains approximately 88-94 per cent dry matter, 38-42 per cent crude protein, 13-14 per cent acid detergent fibre, 0.13-0.16 per cent calcium, 0.96-1.04 per cent phosphorus, 0.47-0.51 per cent sulphur and five to six per cent crude fat (dry matter basis). It also contains nearly the same amount of net energy as barley.

Distiller grains plus solubles can be fed to cattle on pasture in either the dry or wet form. Current data suggests that wheat-based dried distiller grains and solubles (DDGS) can be incorporated into a backgrounding diet at up to 32 per cent of the ration dry matter and 23 per cent of the ration dry matter in a finishing ration. However, due to the high levels of protein, phosphorus and sulphur in DDGS, it is recommended to limit the DDGS to a level that does not exceed 30 per cent of the ration dry matter.

Distiller grain products can be beneficial as an additional feed supplement for cattle on pasture

Analysts expect that dried distiller grains will become increasingly available to Saskatchewan cattle producers as a feed source that competes with barley for energy, and canola meal for protein. In the future, Saskatchewan cattle producers should be in a position to utilize this feed as an optional resource in their feeding programs.

FOR MORE INFORMATION

- Call the Agriculture Knowledge Centre at 1-866-457-2377.

Protect your calves and your pocketbook: vaccinate against Bovine Virus Diarrhea

by Grant Zalinko, PAg
Beef Consultant, Feedlots
Livestock Development Branch

Now that the breeding season is on the horizon, it's time to prepare for Bovine Virus Diarrhea (BVD) vaccinations.

BVD virus is a threat to herd health and producers' pocketbooks.

Dr. John Campbell, professor at the Western College of Veterinary Medicine in Saskatoon, says the virus can potentially cause major problems such as abortion, calf mortality, or infertility. He says it's crucial to vaccinate the cow in order to protect the fetus from infection during gestation.

"If there's a cow walking around unvaccinated in the pasture in early pregnancy, and she gets infected, she may not get very sick, but the virus infects her fetus," Campbell said. "If that happens at a certain time of gestation, it can cause abortions or congenital abnormalities, or can cause the new calf to become persistently infected."

Persistently infected calves are often the source of a BVD outbreak.

From a feedlot operator's perspective, the calves persistently infected with BVD represent additional cost and lost income. The calves may initially appear normal, but begin to show symptoms of pneumonia, lameness or weight loss. Antimicrobials are used in an attempt to treat these sick animals, but in the majority of cases, prognosis is poor. Persistently infected calves tend to remain in chronic pens, and they usually die of pneumonia-related illness or are euthanized.

Cow-calf producers are encouraged to prevent these problems by vaccinating their cows against BVD.

The best time for vaccination is three to four weeks prior to breeding, Campbell says. There are two types of vaccine: a killed vaccine or a modified-live vaccine. Campbell says the modified-live vaccine provides better protection in most cases, and many of the modified live vaccines have label claims that prove fetal protection.

Some producers prefer to use a killed vaccine in the fall, but that means the killed vaccine is relied on to maintain its effect from fall until the next breeding season. This is not nearly as effective, Campbell says.

As well, there are some vaccine companies whose labels claim that a live vaccine can be used on pregnant cows very late in gestation. Campbell warns that this approach is effective only if the cow has been vaccinated within the last year with the same vaccine. If not, then the cow may abort.

Campbell says it's important for producers to discuss specific herd management practices with their veterinarians, and ensure the most effective vaccination method is used.

If a herd is already infected with BVD, it's still important to vaccinate to prevent a broader outbreak the following year. The producer must try to find the persistently infected calves and cull them from the herd. Veterinarians have a relatively simple test to identify the BVD carriers.

FOR MORE INFORMATION

- Contact Dr. John Campbell, Professor, Western College of Veterinary Medicine, at (306) 966-7158, or e-mail john.campbell@usask.ca.

SPRING BLACK STEM CAN REDUCE ALFALFA VIGOUR AND YIELDS

by Michel Tremblay
Provincial Specialist, Forage Crops
Crop Development Branch

Saskatchewan alfalfa fields will soon be greening up, however, under some conditions, alfalfa can seem slower off the mark and the colour not nearly as attractive.

The reason may be due to the disease called spring black stem and leaf spot, caused by the fungal pathogen ***Phoma medicaginis***.

Spring black stem can cause a field to have a dingy appearance from a distance, the result of leaf and stem discoloration. The disease can also reduce growth rates, yield and quality. Plants can be stunted and unthrifty, with greater infestations reaching further up the stem and affecting leaf tissue.

Symptoms begin with the formation of small purple lesions that look like tar spots on stems, leaves and crown tissue. As the disease progresses, lesions coalesce and turn black, potentially girdling the stem.

Lower leaves may drop off and young stems and crowns may be killed, explaining the open, unbranched look of some fields. If cool, moist weather persists, infection may spread to upper portions of the developing alfalfa plant, causing flowers and pods to drop. The seed can be infected, lowering seed weight and creating discoloration.

Spring black stem can also cause seedling blight. Inoculum persists on crop residue and crowns, and can be spread by using infected seed. Fruiting bodies, or pycnidia, produce spores in fall and spring, which spread by rain splash. Successive years of cool wet weather may result in a disease outbreak.

Control of spring black stem can be accomplished by using certified seed when establishing new fields and/or using fungicide seed treatments.

Cut infected fields early to reduce inoculum spread and quality loss due to dropped leaves. Cut cleaner crops first to avoid spreading inoculum to other fields, and cut older fields first. Burn fields in the spring to reduce inoculum load. However, burning can also slow spring growth and thin the stand. The foliar fungicide Dithane DG is registered for use on seed alfalfa only. Make first application prior to 50 per cent bloom and repeat if necessary.

FOR MORE INFORMATION

- Contact Michel Tremblay, Forage Specialist, Crop Development Branch, at (306) 787-7712.

Fruit Industry Development and Pruning to Optimize Yield

by Forrest Scharf,
Provincial Specialist, Fruit Crops
Crop DevelopmentBranch

There are many ways to optimize the yield of fruit trees and shrubs. Techniques include many common agricultural practices like: ensuring plants receive the requisite nutrients and water; minimizing the negative impacts of weeds, insects and disease; and spacing the plants at a distance apart that maximizes the conversion of energy from the sun into energy usable by the plant.

A horticultural technique not practiced by the larger agricultural community is pruning. It seems counter productive that removal of plant growth could translate into improved yields, but for most perennial fruit crops this is true. Part of the reason is that, like proper spacing, more of the sun's energy can be converted into plant food that in turn, is directed toward the production of fruit and new plant growth (instead of unproductive woody tissues). With most fruit crops, pruning techniques have developed over time in areas with a long history of production. The grape vineyards of France and Italy are a good example of this.

In Saskatchewan, our saskatoons and dwarf sour cherries are spreading bush type plants that do not have a history of commercial production in other areas of the world. As a result, the best pruning techniques have not been developed for these plants. The period between planting to fruit production commonly takes from three to five years. Furthermore, as the plants mature, fruit production increases yearly. Without proper pruning, the greater balance of the plant tissue starts to become non-fruiting and production begins to decline. Pruning can make a higher level of yield sustainable for a greater period of time.

Understanding the physiology and growth characteristics of these species allows scientists to anticipate what the best pruning techniques will be. Clarence Peters, the recently retired provincial fruit specialist, had good suggestions about how to optimize the yield of these crops, and experiments based on his theories will be conducted over the coming years.

As the new provincial fruit specialist, I look forward to the development of protocols for best pruning practices of saskatoons and dwarf sour cherries.

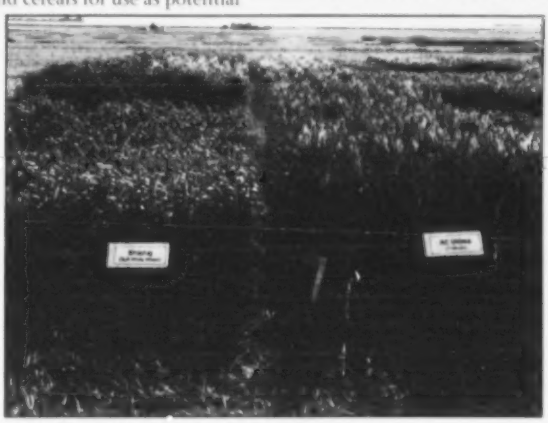
FOR MORE INFORMATION

- Contact Forrest Scharf, Provincial Specialist, Fruit Crops at (306) 787-4666 or forrest.scharf@gov.sk.ca.

WESTERN CANADIAN ETHANOL PROJECT

by Shannon Chant and Sherrilyn Phelps,
Crop Development Branch

As ethanol production in Saskatchewan increases, interest in the adaptation of different wheats and cereals for use as potential feedstocks became a high priority for the Western Applied Research Corporation. To address this issue, research began in 2005 at the Agriculture and AgriFood Canada location in Scott. In 2006 and 2007, interest within Saskatchewan and Western Canada increased to the point that in 2007, there were 25 locations across Western Canada that participated in what has been termed the Western Canadian Ethanol Project.



Cereal varieties trial at Scott Research Farm

Dr. Curtis Pozniak, a wheat breeder from the Crop Development Centre, has been instrumental in the project and has been responsible for the quality analysis for protein and starch, as well as putting the yield data together. Information from varieties grown in 2007 was included in the Saskatchewan Variety of Grain Crops for 2008.

In 2007, the project included hard red spring wheat (AC Barrie and AC Superb), soft white wheat (AC Andrew and Bhishaj), Canada prairie spring (CPS) white wheat (AC Vista and SnoWhite 475), and CPS red wheat (AC Crystal and 5700 PR). Spring triticale (AC Ultima) and hulless barley (CDC McGwire) were also included as there was some potential for use as ethanol feedstock and yields in relation to wheat needed to be evaluated.

In Saskatchewan, the 2007 trial locations included the Agriculture-Applied Research Management (Agri-ARM) locations of Scott, Canora, Melfort, Swift Current and Redvers, as well as other partners at Lake Lenore, Regina, and Saskatoon. There was also a location under irrigation at Outlook.

Initial results show soft white wheat varieties outyielding all other wheat classes, up to 140 per cent of Superb yields. Next in terms of yield were the CPS white varieties (up to 116 per cent of Superb) followed by CPS red varieties (up to 104 per cent of Superb). Other crops being tested, such as triticale and hulless barley, yielded similar to the soft white wheat, 127 per cent and 128 per cent of Superb, respectively.

As these are initial results, the full report will be made available once the protein and starch analysis has been completed. Watch for this trial to be repeated in 2008.

FOR MORE INFORMATION

- Contact Shannon Chant, Saskatchewan Agriculture Crop Development Specialist at (306) 778-8291 or at shannon.chant@gov.sk.ca.

National organic standards update

by Chantal Stumborg, PAg
Provincial Organic Crop Production Specialist
Crop Development Branch

The global demand for organic products is growing at a remarkable 15 to 20 per cent each year.

Canadian organic producers and processors will have an opportunity to access these dynamic national and international market opportunities now that Canada has developed national organic standards.

Canada's new organic regulations were passed by the federal government in December 2006, and will come into effect on December 14, 2008. These standards require that anyone selling organic product for inter-provincial trade and/or international export must be certified as organic by an accredited certifying agency. Certifying agencies include any certification body that is approved by the Canadian Food Inspection Agency.

It is expected that the new system will help to retain consumer confidence in the term "organic," and will expand organic marketing opportunities for Canadian business.

The national organic standards are composed of two parts. Part I details the agricultural practices that are acceptable in organic agriculture production systems. Part II lists substances that are permitted for use in organic systems. Details can be found on the Canadian General Standards Board website at www.pwgsc.gc.ca/cgsb/on_the_net/organic/index.html.

Certified organic producers and processors will have the use of the Canada Organic label. This label will help consumers to identify products that meet Canada's national organic standards.

In Saskatchewan, certified organic producers and processors, who are already certified by an accredited certification agency, will be affected only minimally by the implementation of the new regulations.

All organic producers are encouraged to adopt the national organic standard regardless of the end market.

FOR MORE INFORMATION

- Contact Chantal Stumborg at 306-798-0945;
- See the Canadian General Standards Board website at www.pwgsc.gc.ca/cgsb/on_the_net/organic/index.html; or
- See the Canadian Organic Growers' website at www.cog.ca/info_eng.html.

Opportunity Knocks!

FIVE SECTORS OF AGRIBUSINESS IN SASKATCHEWAN

Opportunity knocks for developing sectors of agribusiness in Saskatchewan.

Speakers at the second annual Opportunity Knocks conference held in North Battleford earlier this year told attendees that each of the sectors of agri-tourism, bio-fibre, biofuel, organics and fruit require research and planning to develop a successful operation and take advantage of the opportunity.

Tim Ouellette from Tourism Saskatchewan discussed the difference between agri-tourism and traditional commodity farming. Agri-tourism is not as capital intensive and does not require the large land holdings needed for commodity farming. Examples of agri-tourism include u-pick fruit operations, farm tours, bed and breakfasts and interactive stays where folks participate in farming activities such as feeding livestock.

One challenge to overcome, he said, is to build clusters of tourism activities that can meet travelers' desire for an enriched, hands-on experience while taking into consideration the need to support all operators in the group or area. Overall, agri-tourism enhances the diversity of a region and helps to enrich the experience of local inhabitants.

Shannon Chant, Saskatchewan Agriculture Crop Development Specialist, highlighted the various types of bio-fibre, as well as current research and the growth the bio-fibre industry is experiencing. Bio-fibre sources include plants such as flax, ramie, kenaf, sisal, jute and hemp while animal fibre sources include alpaca, llama, sheep, angora goat, rabbit and bison. Plant fibres are graded and used in a variety of ways including plastic composites, textiles, insulation, absorbency products, filtration, specialty paper and building materials. Animal fibres are mainly used in the apparel industry.

A fibre directory is available through Saskatchewan Agriculture. This directory lists businesses in this growing industry that offer a variety of natural and renewable materials.

This conference, which was hosted by the Ministry of Agriculture and the Ministry of Enterprise and Innovation, shared highlights on current research, resources and services available through the ministries.

For assistance with your individual agri-business startup or expansion, or to speak with one of our regional specialists, please contact one of our nine regional offices.

FOR MORE INFORMATION

- Contact Jason Wood, Agri-Business Development Specialist with the North Battleford Regional Office, at 306-446-7961.

Consumer Trends Drive Changes in Food Retail

by Doris Morrow
Manager, Marketing Unit
Market Development and Food Branch

The focus of discussion at a conference held recently by the Canadian Council of Grocery Distributors was major trends affecting the food retail industry in Canada. Environmental concerns, food safety, consolidation in the industry, changing demographics in Canada and an increasing interest in health and wellness by consumers were cited as some of the most important developments in this industry.

Since the early 1990s there has been a continuing trend towards consolidation in the food retail environment in Canada. This trend is expected to continue as food retailers aim to increase economies of scale and gain greater access to new markets through acquisitions. Saskatchewan's food processors will be faced with fewer and larger distributors and retailers that have centralized their buying process.

Food retailers are being presented with 20,000 to 30,000 new products each year. While competition for retail shelf space is stiff, there are still a number of opportunity areas for suppliers. Food retailers are always looking for ways to differentiate themselves from their competitors by offering unique products that meet consumer demand.

Retailers are taking into account consumers' concerns over environmental issues and will be looking to meet the demands of consumers who have concerns over packaging waste and the use of chemical substances in food and packaging. Also, there is a growing interest in the idea of buying local - a trend which could bode well for many of Saskatchewan's food processors.

One of the most significant trends that will affect the demand for food in Canada is the changing demographics. By 2026 it is expected that 21% of Canadians will be over the age of sixty-five. Canada's aging population and slow population growth will limit growth in the volume of food consumption. It is expected that population growth will mainly come through immigration which presents an opportunity to meet unique needs.

Canadian retailers have identified products that meet the needs of Canada's growing ethnic population and foods that integrate health and wellness with convenience as key growth areas, and retailers will likely look more and more to suppliers of these product types.

Success in the food industry will be based on the ability to provide unique products that meet consumer needs.

Competition for retail shelf space is extremely aggressive

FOR MORE INFORMATION

- Contact the Market Development branch of Saskatchewan Agriculture at (306) 787-8523.

PRAIRIE APPLE PRODUCERS GROUP GROWING NEW VARIETIES

by Don Perrault
Agri-Business Development Specialist
Agri-Business Development Branch

Who would have thought it possible? Just a few years ago, apples were grown in backyards across the prairies, but the product quality was generally low. Today, all of this is changing based on research done at the University of Saskatchewan into newer and better varieties.

An example of new varieties being bred at the University of Saskatchewan

The University of Saskatchewan Domestic Fruit Program now has three to four newer varieties that rival what is currently on the market. One variety released last year called "Prairie Sensation" has been tested by Prairie producers for about five years. Many people say that this variety tastes like a Gala apple. It is a late season apple, both sweet and crisp, and will keep for quite a long time under good storage conditions. Dr. Bob Bors, fruit breeder at the University of Saskatchewan, indicates that they have two to three more excellent quality varieties which they are in the process of testing on prairie farms.

New varieties like Prairie Sensation were tested for hardiness under Saskatchewan conditions and are established in commercial orchards at various locations in the province. Currently there are more than 100 acres of apples in commercial orchards in Saskatchewan.

In May 2007, a number of apple producers from the province joined together to form the Prairie Apple Producers Inc. It is hoped that the group will facilitate a close collaboration amongst the apple producers. The group currently has 10 members and has received many inquiries. Based on this response, they hope to double their membership by this summer.

Prairie Apple Producers Inc. are innovative and willing to look at new ways of advancing their industry. Over the next few months, the group plans to develop a brand for their product, do some analysis for a nutritional label and develop marketing materials including a website, a marketing brochure and a U-Pick program for their members.

Brian Kosteroski with the Agricultural Council of Saskatchewan and Saskatchewan Ministry of Agriculture staff have worked with this group since their inception. With their guidance, the group has been able to access programs to move their project forward.

FOR MORE INFORMATION

- Contact Don Perrault, Agri-Business Development Specialist, Prince Albert regional office at (306) 953-2361, or at donald.perrault@gov.sk.ca.
- To learn more about the Prairie Apple Producers Inc., contact Mike Noel at (306) 497-2234 (home), (306) 956-3590 (office), or at mikenoel@hotmail.com.

Agri-Business Development Series
Developing the Business Plan

by Ron Monette
Agri-Business Development Specialist
Agri-Business Development Branch

Developing the Business Plan continues the series of articles by the Agri-business Development Branch which explore information and resources available to the aspiring agri-business person in Saskatchewan.

A detailed business plan is used to communicate objectives to internal and external stakeholders. It is used to seek financing, measure performance and sell the business idea to the world. As such, a variety of different audiences assess it for both completeness and clarity.

Every business can benefit from the preparation and continuous maintenance of a carefully written business plan. The hardest part is getting started, since the thought of writing such a comprehensive document may seem overwhelming. It is suggested you take on the task one step at a time.

The Business Plan Guide provides a step by step process, complete with questions to ask yourself as you proceed, which will assist you in this task. This document is available on Saskatchewan Agriculture's website (see link at the end of this article).

Set aside some time each day to complete a few sections. If you're unable to fully answer a question, jot down your preliminary thoughts and allow further time to think about what the question suggests. As you continue your research, go back and add to sections you've previously missed. Even if you cannot answer every question, it is good to be aware of these sections as they may affect your business in the future.

As writing the plan progresses, you may find the course of your business and the business plan changing. This is okay. This could be an indication that issues are being carefully considered and addressed. It is better to recognize needed changes in the planning stage rather than after the business is well underway and your investment is fully at stake.

Most business plans go through several revisions and may take up to six months to complete. As changes in the business environment occur (i.e. new competition, new product design), a company's business plan should be modified to reflect the new environment. A business plan is not a static document. It should evolve as the business grows.

Think of your business plan as a sales document. After all, it must convince you and others that your venture has the potential to be successful. Your enthusiasm, dedication and confidence in the project should be evident to the reader, to the point that they will share your view.

Agri-Business Development Specialists with Saskatchewan Agriculture can help facilitate the development of a business plan. Contact a member of our regional office if you'd like to learn more about agri-business development and how our team can help you advance your business.

FOR MORE INFORMATION

- Contact Ron Monette, Agri-Business Development Branch at (306) 933 – 6128 or ron.monette@gov.sk.ca.
- Access the Business Development Guide and Business Plan Guide, located on the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca under Development | Business Planning.

ECONOMIC DEVELOPMENT ASSOCIATION OF CANADA (EDAC) 2007 ANNUAL CONFERENCE

by Ron Monette
Agri-Business Development Specialist
Agri-Business Development Branch

Shifting the perception of Saskatchewan agriculture was a primary goal of the 2007 Economic Development Association of Canada (EDAC) annual conference. Still perceived by the world, and even Eastern Canada, simply as a wheat-growing province, this conference exposed delegates to Saskatchewan's new and emerging agriculture industry.

Presentations respecting the new realities in agriculture included biofuels, agricultural biotechnology, agriculture's emerging role in life sciences (nutraceuticals, biopharmaceuticals and the link between health and nutrition), Innovation Place as a centre of excellence, modern farm equipment manufacturing and the importance of ag-related regional economic development planning approaches.

More than 400 delegates from Saskatchewan, Canada and around the world attended this learning event, which helped build awareness of the province's emergent agri-business diversification.

Local and regional business development resource people, who are available to assist with project development, influence agribusiness development in Saskatchewan. It is estimated that 200 of the delegates were economic development practitioners from Saskatchewan representing agri-business and community leaders (including rural municipality administrators), private and public sector organizations, municipal, provincial and national government agencies, and other interested stakeholders who are applying the key learnings to the benefit of agri-business in the province.

Investment officers from consulate posts around the world were in attendance and exposed to what the new and emerging Saskatchewan agriculture industry is all about. Feedback was extremely positive and it is recognized that there is a shift in perception with this audience. It was evident that Saskatchewan was no longer just about primary crop and livestock production but rather, the province is a leader in many of these new and emerging areas.

The awareness, skill and capacity of community leaders and economic development practitioners - including the area of agri-business development - were enhanced with respect to emerging business and community development tools and models. This will ultimately result in positive impacts on individuals and local communities in terms of their ability to attract new investment, develop new business and markets and generally increase the local capacity for continued economic development.

FOR MORE INFORMATION

- Contact Ron Monette, Agri-Business Development Specialist at (306) 933-6128 or e-mail ron.monette@gov.sk.ca.

Saskatchewan Company Proves Pigs Can Fly

Saskatchewan's pig genetics are about to make their mark on the world's largest market, thanks to a shipment of pigs to China.

Fast Genetics of Saskatoon recently shipped 866 pigs to Chengdu, China, where they will form the breeding nucleus of a joint venture company called Tianzow Foods.

Fast Genetics is based in Saskatchewan, but its parent company is Hytek Ltd. from southern Manitoba. Hytek Ltd. is a large pork-producing and processing company which has an equity interest in Tianzow Foods, a vertically integrated company that owns pork production facilities, slaughtering and processing plants, and a chain of retail meat stores. Tianzow Foods has acquired rights to distribute Fast Genetics in China.

The pigs originated in the Fast Genetics facilities at Melfort and Spiritwood. Their journey took them first to Manitoba, then Chicago by truck, and finally on to China via jumbo jet.

"We did charter a Boeing 747 freightliner, which exclusively carried our pigs on this trip, requiring a flying time of about 20 hours," Fast Genetics general manager Shannon Meyers said.

China offers a market of 1.3 billion people who love their pork, consuming a per capita average of 38 kilograms of pork per year.

"This is a sale where we look at the margins and make a business case to do this single shipment - but it's really greater than that in the potential for our company over the long-term," Meyers said. "The goal will be to both utilize the offspring in our internal operation and to sell genetics to other Chinese producers."

Even though Canada is considered a high health status exporter of live pigs, completing this transaction did not come without its challenges. The animals were blood-tested twice in Saskatchewan at source farms. Then, they were moved to Manitoba and spent 49 days in quarantine, overseen by a Chinese government veterinarian, and blood-tested again. The pigs also required 45 days in Chinese quarantine and a fourth consecutive clean blood test before final release to their owner in China.

Fast Genetics owns 3,700 sows in genetic nucleus and multiplication production in Saskatchewan. Their genetics are found in sow herds and market hogs across Canada, the United States, Mexico, France and, now, China.

"When we look at the opportunities, we think they're great," Meyers said. "One of the reasons is that Saskatchewan is recognized as a great place to produce healthy breeding stock is because of the low density of hogs in the province. From an international standpoint, Saskatchewan is very well viewed as a preferred place to source breeding stock."

Meyers says Fast Genetics is planning to continue its international genetics export business.

"It's a huge undertaking and we have a great staff, who have a lot of commitment to doing it," he stated. "We're exploring other international opportunities, and now that we have this under our belt, our goal will be to get into other countries as well."

FOR MORE INFORMATION

- Contact Shannon Meyers, Fast Genetics General Manager at (306) 667-1420 or;
- Visit http://www.fastgenetics.com.

OBSOLETE PESTICIDE COLLECTION PROGRAM SUCCEEDS

by Wayne Gosselin, PAg
Environmental Policy Analyst
Policy Branch

Saskatchewan producers deposited 124,516 kg of unwanted and obsolete pesticides for safe disposal at 45 designated ag-retail collection sites across the province during the obsolete pesticide collection campaign held October 23-25, 2007.

The last obsolete pesticide collection program in Saskatchewan, conducted over three days in October in each of 1999, 2000 and 2001, collected 160,410 kg of obsolete product.

The campaigns have been an industry-led stewardship program aimed at collecting and safely disposing of obsolete agricultural pesticides.

Initiated by CropLife Canada and the Agriculture Council of Saskatchewan Inc., the program was financed by CropLife Canada and the Advancing Canadian Agriculture and Agri-Food Saskatchewan (ACAAFS) Program provided by Agriculture and Agri-Food Canada. ACAAFS funding was provided to the Agriculture Council of Saskatchewan Inc.

The program was also supported by Saskatchewan's agricultural retailers, the Canadian Association of Agri-Retailers, the Saskatchewan Ministry of Agriculture and the Saskatchewan Ministry of Environment.

"This program provided a safe, effective and cost-free way for farmers to properly dispose of obsolete products," said Lorne Hepworth, President, CropLife Canada. "Together with farmers, government, stakeholders and industry, we have continued to demonstrate our industry's commitment to the environment and the safety of our communities."

"This is an excellent program from a rural, environmental and health standpoint," Saskatchewan Agri-Environmental Advisory Council chairperson and Naicam-area farmer Germain Dauk said. "It shows that farmers, retailers and manufacturers are very responsible regarding the environment and health."

Hepworth said stewardship is the priority. "These types of programs build on our industry's commitment to environment and public health," he said. "Thanks to industry's efforts and support from government, industry, ag-retailers and farmers, we have ensured the proper management of our crop protection products."

CropLife Canada is a non-profit trade association representing the manufacturers, developers and distributors of plant science innovations, such as pest control products and plant biotechnology, for use in agriculture, urban and public health settings.

The Obsolete Pesticide Collection Campaign is part of CropLife Canada's Stewardshipfirst™ programs that support the responsible use of crop protection and plant biotechnology products throughout their entire lifecycle. More than 1.2 million kg of obsolete pesticides have been collected throughout Canada since 1998.

- See CropLife Canada's website at http://www.croplife.ca.

Photo: courtesy of Viterra

Project looks at link between stress and disease severity in cattle

by Dr. Henry Soita
Program Manager, Livestock and Forages
Agriculture Research Branch

A research project completed by scientists at the University of Saskatchewan's Vaccine and Infectious Disease Organization (VIDO) is breaking new ground in identifying the relationship between stress and disease susceptibility in cattle.

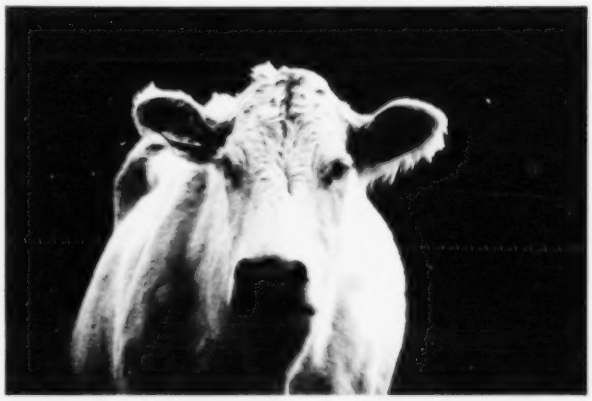
The research sought to identify biomarkers associated with stress, as stress makes animals more susceptible to a number of diseases such as bovine respiratory disease.

The team investigated how changes in certain blood compounds, called metabolites, can be used as biomarkers to predict the dangerous combination of stress and disease.

What puzzles scientists is that exposure to viruses or bacteria cause disease in some individual animals, but not in others. Bovine respiratory disease involves an interaction of viral and bacterial infections, and is a disease most likely associated with stress-susceptible animals.

The refinement of biomarker tracking could result in identifying disease-susceptible animals at the feedlot or the ranch, allowing for earlier intervention and handling methods that will minimize stress. An important aspect of this project was to help producers understand the effect of handling-related stress and disease susceptibility, and to help in the identification of susceptible animals.

The VIDO study was funded by the Saskatchewan Ministry of Agriculture's Agriculture Development Fund, the Ontario Cattlemen's Association, Genome Prairie, Genome British Columbia and Inimex Pharmaceuticals Inc. The results of the study have now been published in the scientific journal Omics.



VIDO scientists will be pursuing future funding to move their experimental results into a clinical setting as a diagnostic tool.

A summary of the ADF report, ***Proteomic Investigation of Molecular Basis of Stress and Disease Resistance in Cattle***, project number 20020145, can be obtained by phoning Saskatchewan Agriculture at (306) 787-5929, or downloaded from the Saskatchewan Agriculture website at www.agriculture.gov.sk.ca.

FOR MORE INFORMATION

- Contact Dr. Henry Soita, Program Manager, Livestock and Forages, Agriclture Research Branch at (306) 787-2256 or e-mail henry.soita@gov.sk.ca.

AGRI-ARM RESEARCH IN 2007

by Shannon Chant
Crop Development Specialist
Crop Development Branch

The Saskatchewan Agri-ARM (Agriculture-Applied Research Management) Program connects eight regional applied research and demonstration sites into a province-wide network. Each location has an affiliated producer group that sets the research priorities for that site. All of the sites work with a number of companies, commodity groups, universities and government organizations on a regular basis. Saskatchewan Agriculture provides funding for each Agri-ARM site, including in-kind contributions made by the Crop Development Branch. In 2007, total funding allotted to the Agri-ARM program by Saskatchewan Agriculture was approximately $350,000.

These sites provide producers with valuable information on potential crops, new crop varieties, agronomic practices, new technology and products and allow industry to conduct research in a specific region or in numerous locations in the province. This article has just a few examples of the numerous projects that take place at Agri-ARM sites.

In 2007, the East Central Research Foundation (ECRF) in Canora conducted variety trials on wheat, oat, flax, canola, malt barley, sunflower and annual forage crops. Demonstrations at ECRF include perennial forages (nine legume and 30 grass varieties), sour cherries, blue honeysuckles (haskap), sea buckthorn, strawberries, apple trees, shelterbelt species and hybrid poplars.

The North East Agricultural Research Foundation and Agriculture and Agri-Food Canada's Melfort Research Farm had demonstrations on 36 forage crop varieties and many potential crops (16 annuals and 18 perennials) for northeast Saskatchewan. The Melfort Research Farm partnered with the Scott Research Farm and the Western Applied Research Corporation (at Scott) to conduct research on calendula, a potential new crop for Saskatchewan

The Conservation Learning Centre near Prince Albert conducted research on the effects of spray drift on 30 forage species and the forage quality of alfalfa after spraying with glyphosate before the first cut. Weed control in tree plantations was also researched at the centre, including a demonstration using geese. New or novel crop opportunities for the North Central region were investigated using a demonstration of 16 annual and eight perennial varieties.

The South East Research Farm (SERF) near Redvers is researching the response of Argentine canola to pushing compared to the timing of swathing. SERF also conducted research on soybean production in Saskatchewan. A cost/benefit analysis is being conducted for using AC Greenfix (a chickling vetch variety) or Indian Head lentil green manure prior to seeding winter wheat to try to reduce fertilizer costs.

FOR MORE INFORMATION

- Contact the Agri-ARM site at (306) 933-5567 or e-mail agriarm@gov.sk.ca.

Support for meat processing

by Catherine Folkersen
Manager, Food Industry Development
Market Development and Food Branch

Developing an innovative meat product and getting it into consumers' hands has never been an easy task.

A variety of initiatives available in Saskatchewan can make that task much easier.

Entrepreneurs and Saskatchewan companies with ideas for creating new products they want to test in the market are encouraged to contact the Saskatchewan Food Industry Development Centre (Food Centre), which can provide assistance from the planning stages through to the packaged and labeled product that's ready for test marketing.

There is no charge for the initial consultation, and the Food Centre staff is always eager to help a new idea move to the market. The Food Centre can also direct clients to other available programs that will support their business needs.

The Food Centre is a federally inspected pilot plant, which means that meat products processed meet all Canadian Food Inspection Agency (CFIA) requirements. This is a requirement to export beyond provincial borders.

The Food Centre is also certified to process organic food products, including meat.

Companies that are successful at the Food Centre may wish to work on growing their market before building their own production facility. If that is the case, the Saskatchewan Toll Processing Centre (STPC), located in Melfort, is available to help.

STPC offers meat processors the opportunity to enter the market without having to invest in plant construction and equipment. The centre is federally registered in Canada; is registered with the Food and Drug Administration (FDA) of the United States; is recognized as HACCP certified by the CFIA; and is certified as an organic processor.

Using the expertise within Thomson Meats Ltd., now TML Foods Inc., the STPC offers clients 46 years of experience in the meat processing industry, and valuable connections to the retail market. If the client's test market phase is a success, then the STPC offers a method to supply the market in large volumes without the client having to build a facility.

Companies that require marketing expertise can apply to the Saskatchewan Trade and Export Partnership (STEP), which has various programs, including a Marketing Internship Program that will cover 50 per cent of the cost of hiring a recent graduate of a marketing program.

At times, it's a challenge for small companies to assemble financing for a large order. STEP offers an export financing program called nextrade finance.

The program offers export financing solutions that can be customized to a company's individual needs. It provides short-term, affordable financing with flexibility that allows exporters to grow their business and enhance cash flow.

FOR MORE INFORMATION

- See the Food Centre's website at www.foodcentre.sk.ca.

PULSE GROWERS INVESTIGATE OPPORTUNITIES IN INDIA

With a gross domestic product growing at eight per cent per year, a population of 1.2 billion and a high demand for pulse crops, the burgeoning Indian market is too attractive for Saskatchewan agricultural producers to ignore.

The Saskatchewan Pulse Growers (SPG) sent a delegation of four to India to investigate the potential for split decorticated green lentils in Indian food, and to determine the capacity of Indian agricultural institutions to collaborate on research. They were accompanied by representatives from Pulse Canada, the University of Saskatchewan Crop Development Centre and Agriculture and Agri-Food Canada.

The Tamil Nadu Agriculture University in Coimbatore was a key destination for the group. Meeting with management and research scientists, they explored research possibilities for incorporating green lentils into the Indian diet.

Based on the success of the meeting, the Saskatchewan delegation intends to fund a research project at the university. "It's a complete plan, from product development to testing to commercialization," said SPG Executive Director Garth Patterson. The key component will be to evaluate the marketability of Saskatchewan split green lentils in traditional Indian foods.

After leaving Coimbatore, the next stop was Pune to visit the BAIF Development Research Foundation, a non-profit organization founded by Mahatma Ghandi to improve the life of rural subsistence farmers.

The Canadian government has a strong relationship with BAIF, because the Canadian International Development Agency initially built its head office. As a result, Patterson says the delegation was warmly received, and heard a great deal about how the foundation is working to improve life for farm families.

Other stops on the trip included the Indian Agricultural Research Institute in New Dehli and the Central Institute of Post-Harvest Engineering and Technology in Ludhiana.

Throughout the visit, the delegation learned a lot about India's agricultural industry. Because of the nation's high level of productivity in agriculture, it is able to support its large population.

In a country that is able to grow any crop, wheat and rice are popular for cultivation because yields are four to five times that of pulses. Wheat production also lends itself well to mechanization, while pulses continue to be harvested by hand. As a result, wheat acreage increases and pulse producers are forced toward marginal land.

Despite production challenges, pulses are an important part of the Indian diet. "India is really the Mecca for pulse consumption in the world," Patterson said. "They are still the largest producer and consumer of pulses, and historically pulses have been a part of every meal of the day for centuries. So that's the big opportunity for us as exporters of pulse crops."

According to Patterson, if enough pulses were available, India would consume 18 to 20 million metric tonnes per year. Annual production totals only 15 million metric tonnes.

Saskatchewan faces the opposite situation. Plenty of pulses are produced, but only a small percentage is consumed domestically. While Canadian pulse producers work to develop the North American market, one million metric tonnes of peas will be exported from Saskatchewan to India this year.

Green lentils represent the next big opportunity for Indian export, because of their potential to complement common dishes. "India is already our most important customer, as far as exports go," Patterson said. "We think there's opportunity for that to grow even more."

FOR MORE INFORMATION

- Contact the Saskatchewan Pulse Growers at (306) 668-5556; or www.saskpulse.com.

Remember your neighbours when managing flax straw

To many of us, there is a certain nostalgia associated with the smell of smoke. Fond memories of summer campfires, burning leaves in the fall and the comfort of wood burning stoves in the winter can be evoked by those wisps of smoke in the air.

Unfortunately, for many others, the incidence of smoke and the particulates it sends into the atmosphere do not represent a positive experience at all, but a very serious health risk.

With spring soon upon us, some farmers will be looking to burn off flax straw from last year's harvest before seeding this year's crop. The Saskatchewan Flax Development Commission is encouraging producers to be mindful of the impacts that burning flax straw can have on individuals with lung and pulmonary ailments, as well as on society and the environment in the broader context.

One of its partners in the effort is the Lung Association of Saskatchewan. Paul Van Loon, the Vice President of Health Education with the Association, says it is more often a case of people being unaware of the harmful effects that burning and smoke can create, rather than simply not caring.

"In an area like Saskatchewan, people are generally less mindful of air quality than other issues," Van Loon noted. "For example, people will usually care and take action regarding litter on the ground, because it has a visual impact. But when it comes to smoke, most people think it just disappears because you can't see it."

Although there may be a limited visual appearance to smoke, there is nonetheless a very powerful health impact. To those suffering from a variety of respiratory conditions, smoke of any type – including from flax straw – can pose a real health hazard.

People who suffer with these conditions are faced with having to stay indoors, taking increased medication, missing work or school days, and potentially making a rushed trip to the emergency room of the nearest hospital. This group also includes asthma sufferers, for whom smoke and the particulates it discharges can trigger an asthma attack.

Most often, it is the elderly, the very young and anyone with a compromised immune system who faces the brunt of these effects.

"For whatever reason, we are a changing population, and many people are becoming more sensitive to certain environmental conditions," Van Loon said.

The Lung Association of Saskatchewan website advises that if producers have to burn because of extenuating circumstances, they should take the following factors into consideration:

- Never burn at night. Damp conditions produce more harmful smoke emissions. Temperature changes and calmer conditions often cause smoke retention or poor dispersal. Burn only after 11:00 a.m. and be sure that all fires are extinguished well before sunset.
- Have an adequate fireguard and water supply.
- Burn only when wind conditions allow for quick upward dispersion of smoke. Producers are urged to consult Environment Canada regarding wind conditions in their areas. Smoke should never be allowed to drift over neighboring communities or roads.
- Do not burn across an entire field or windrow. A large field, stubble or windrow burn produces more smoke. Piled or baled straw will burn hotter and faster, and produce fewer pollutants.

Legislation to eliminate or limit burning is already in place in many jurisdictions around the world. To date, Saskatchewan has chosen to rely on voluntary action, requesting that producers consider their neighbours as they prepare their fields for seeding.

In the meantime, the Saskatchewan Flax Development Commission is working with the Government of Saskatchewan and Agriculture and Agri-Food Canada on an Agri-Environmental Group Plan for straw management. The goal is to develop beneficial management practices that will enhance economic opportunities for flax straw and improve air quality.

FOR MORE INFORMATION

- Contact the Lung Association of Saskatchewan at 1-888-566-5864; or visit [illegible], and click on the "Air" link, then "About the Air We Breathe," "Outdoor Air Quality," and finally, "Open Burning."

Burning stubble requires extreme caution

2008 Crop Insurance Program Underway

Now that you have made the decision to purchase crop insurance, we would like to remind customers of a few key aspects of the program that may help as you proceed through the upcoming crop year.

To begin, Crop Insurance has several important deadlines that customers must meet throughout the year in order to maintain their contract of insurance. The first dates customers should be aware of following the March 31 sales deadline are the seeding deadlines, beginning with the May 21 deadline to seed chickpeas. Customers are also asked to keep in mind that the deadline to submit your Seeded Acreage Report and to file any Unseeded Acreage claims is June 25.

All deadline information is available in "Your Complete Guide to Understanding Crop Insurance" and at www.saskcropinsurance.com. Crop Insurance also offers an e-deadline reminder service to customers looking for some added assistance in keeping on top of the program. A reminder will be emailed to participating customers a week before each Crop Insurance deadline. To sign up for this free service, follow the links on the home page of our website.

Although March 31 was the final date to make most insurance selections, customers have until August 25 to select winterkill coverage for fall rye and winter wheat seeded in the fall of 2008. Customers may select this option at any time before August 25.

The Crop Insurance website can be a great source of information for customers who want to learn more about the 2008 insurance program and the selections they have made. The corporation also sends a monthly e-newsletter to interested producers looking to stay informed about the program. As with the e-deadline reminders, customers can sign up for this service by following the link on our website's home page.

As always, Crop Insurance staff are available to answer any questions you may have about the 2008 program or your personal insurance selections. Contact us toll-free at 1-888-935-0000.

Program Enhancements for 2008

Saskatchewan Crop Insurance introduced two important program changes in 2008 – the Enhanced Irrigation Pilot and improved coverage for alfalfa seed producers.

Enhanced Irrigation Pilot

In addition to continuing comprehensive coverage for crops grown on irrigated and dryland land uses, Crop Insurance also introduced an Enhanced Irrigation Pilot for eligible irrigation producers in 2008.

The Enhanced Irrigation Pilot is designed to recognize the unique risks associated with irrigated crop production by allowing a separate production guarantee for irrigated and dryland acres of the same crop. Enabling irrigated producers to further tailor their insurance allows them to be protected against losses on one land use without being impacted by the production of the same crop on the other land use.

Coverage is calculated in the same manner as the comprehensive option; however, a claim on irrigated acres of a crop is calculated separately from a claim on the dryland acres of the same crop. To reflect the increased risk associated with calculating claims separately by land use, the producer pays 66.7 per cent of the premium and the governments contribute the other 33.3 per cent.

Customers who have selected the Enhanced Irrigation Pilot in 2008 are reminded they must keep their irrigated and dryland harvested production separate.

Customers are also encouraged to ensure their individual yield records have been updated with Crop Insurance.

Alfalfa Seed

Crop Insurance offered insurance for alfalfa seed for nearly 10 years under its New Crops Insurance Program. Crop Insurance has continued to consult with the Saskatchewan Alfalfa Seed Producers and industry specialists to ensure our programs address the many issues that play a role in alfalfa seed production. As a result of these consultations, the corporation has made some significant changes to its alfalfa seed insurance program for 2008, extending insurance for alfalfa seed to include pedigreed price coverage, individual coverage and experience discount/surcharge.

Alfalfa seed experience from 2006 will be used in the discount/surcharge calculation for the 2008 crop year; price options will be set for both common alfalfa seed and pedigreed alfalfa seed; and individual coverage will be calculated using a 10 year average.

FOR MORE INFORMATION

Complete terms and conditions for alfalfa seed production are available in "Your Complete Guide to Understanding Crop Insurance", online or at your local customer service office.

As with the Enhanced Irrigation Pilot, it is important to ensure your individual production records are up-to-date so that your individual yield will be accurate. Please contact Crop Insurance if you have any questions about updating your information.

Succession Planning: One Family's Story

by Naomi Paley, BSA, PAg
Livestock Development Specialist
Livestock Development Branch

In the Langenburg area, there are two brothers, both of them life-long farmers. They have similar operations, but have taken different paths to passing their farms on to a new generation.

It was 1973 when brothers Jim and Tom Werle decided to take over the family farm from their parents. Three decades later, each of the brothers put in place a succession plan that would see his half of the operation assumed by someone younger.

In the case of Jim Werle and his wife Elsie, the decision was to sell to their daughter Jenay and her husband Zach. For Tom Werle and wife Maxine, the new owners would be a young couple who decided to relocate from Alberta to operate their own farm.

Jim and Elsie have a 1,500 acre farm that is currently focused on a 350-head cow-calf operation on which they finish their own calves.

"We are already a corporation, and issuing shares to the kids is a very simple way of succession planning," Jim said.

They have not set a time-line by which the takeover must be completed. Elsie Werle says it gives both parties a chance to make the transition.

"It works out well, because as time goes on, we won't need as much to live on as we do now," she noted. "As time goes on, the kids will just buy more shares, and the more shares they have, the more ownership they'll have."

Her thoughts are echoed by Jenay, a 26 year-old with an agriculture degree and a career in economic development.

"My husband and I weren't in a position to buy them outright," she said. "Slowly buying them out and purchasing the shares just made sense financially for us."

Jenay feels the key step to any smooth transition is a clear plan.

"It's nice to have a documented plan," she said. "We've run into a few times where we assumed that we were all on the same page, but we weren't. By having a definite plan, it helps alleviate some of that."

Another important aspect for the Werles was to provide for a second daughter, who did not see farming in her future. A special life insurance policy and proper language in their will guarantees that she will receive her due inheritance at the time of her parents' passing.

Bankers, accountants, and lawyers have all been important resources.

"They're not free or cheap, but their advice and guidance is worthwhile," Jenay said. "They are professionals who assist people with this kind of thing all the time."

FOR MORE INFORMATION

- Contact Naomi Paley, BSA, PAg, Livestock Development Specialist, Livestock Development Branch at (306) 786-1686 or naomi.paley@gov.sk.ca.

Succession planning is an integral part of a smooth family farm transition.

Stress, vulnerability and scams: if it sounds too good to be true, it probably is!

by Ken Imhoff, Manager
Farm Stress Line
Saskatchewan Ministry of Agriculture

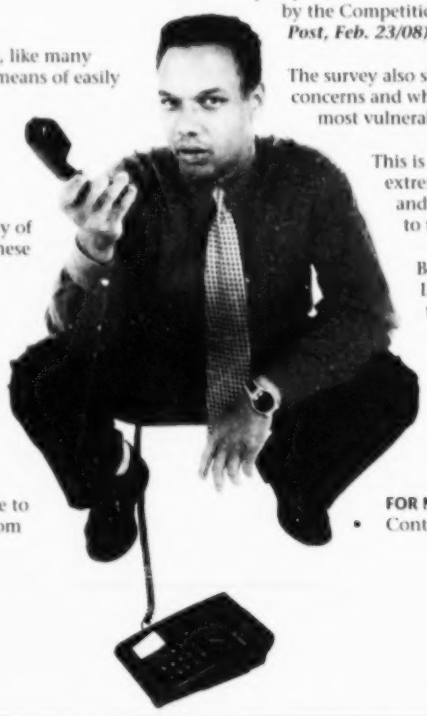
It's the time of year when agricultural producers, like many others, receive calls or e-mails about ways and means of easily accessing money.

These promotions often speak of easy money: simply subscribe to an e-mail service or buy a book or directory.

The Farm Stress Line of the Saskatchewan Ministry of Agriculture encourages the public to be wary of these offers.

When a person is under pressure, that person is vulnerable and may reach for solutions that are too good to be true. No one is insulated from scams, fraudsters, or exaggerated claims.

Recently, the Competition Bureau of Canada commissioned a polling firm to survey Canadians on the subject of scams. That survey showed how many Canadians are contacted by fraudsters, and who is most likely to be vulnerable to fraudulent and bogus schemes that separate us from our hard-earned money.



A February headline in Canadian papers, "Many Scams Successful," drew attention to this issue. The article says: "A stunning 15-million Canadians were repeatedly targeted by mass-marketing fraudsters in the past year, and one million were victims, a major study commissioned by the Competition Bureau of Canada has found". ***(The Leader-Post, Feb. 23/08)***

The survey also showed that it is those who have high financial concerns and who are carrying a high debt load, who are the most vulnerable.

This is of concern to the Farm Stress Line because extreme pressure or stress can compromise thinking, and may effect judgement. One may be susceptible to the scam artists.

Before taking action on any offers, the Farm Stress Line encourages producers to explore any offers that may appear to be "too good to be true."

Producers can research the topic on the internet, or speak with other producers, or call the Farm Stress Line. We're always glad to listen and to help.

FOR MORE INFORMATION

- Contact the Farm Stress Line at 1-800-667-4442

RESOURCES AVAILABLE THROUGH THE AGRICULTURE KNOWLEDGE CENTRE

by David Larsen, PAg
Soil/Nutrient Management Specialist
Agriculture Knowledge Centre

- Do you, as the owner of a business, have production decisions you would like assistance with, or a second opinion on?

- Are you looking for the latest information on production related issues?

- Are you looking for knowledgeable speakers regarding the latest information on crop or livestock production, or production economics?

If you answered yes to any one of these questions, call the Agriculture Knowledge Centre at 1-866-457-2377 for assistance. Resource Agents with Saskatchewan Agriculture can provide you with the information you are seeking, or direct you to the appropriate specialist. Knowledgeable staff are available at the Agriculture Knowledge Centre and across the province to assist you in making important agriculture related business decisions.

Saskatchewan Agriculture staff are also involved in planning and organizing meetings and events throughout the year. There are a number of events scheduled during this winter season. For information on upcoming events, check out the Event Calendar on Saskatchewan Agriculture's website at www.agriculture.gov.sk.ca, or call the Agriculture Knowledge Centre to find out what meetings are being held in your area.

If you are involved with a group or organization that is looking for a speaker for an upcoming meeting or event, we can put you in touch with the right person. Staff from the Ministry of Agriculture have experience and knowledge concerning the current trends and issues in agriculture, and will work with you to find an interesting and knowledgeable speaker for your event.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- E-mail agrimfo@agr.gov.sk.ca.

New crop reporters welcomed

by Terry Bedard
Agricultural Economist, Crops
Policy Branch

Are you looking for a volunteer challenge? Join the Crop Reporting Service of Saskatchewan Agriculture!

Saskatchewan Agriculture has run the crop reporting program in its present form since 1976. Crop reporters in rural municipalities (RMs) across the province provide weekly information relating to crop production, including precipitation, crop conditions, and seeding and harvesting progress. Their responses are compiled into a weekly Crop Report during the crop season.

Volunteer crop reporters cover a defined area, usually the RM in which they live. Some RMs have two or three reporters monitoring conditions in their specific areas.

How does the reporting process work?

Crop reporters keep track of daily precipitation using a rain gauge supplied by Saskatchewan Agriculture. They also complete a questionnaire for each week of the cropping season. Questions vary from week to week to reflect producers' activities through the season. In May, reporters are asked to estimate seeding progress in their area for each of the crops grown. In July, they estimate haying progress and crop development and condition.

Reporters then provide that data to Saskatchewan Agriculture via a toll-free phone call or fax. Staff compile the data, and create the ministry's weekly Crop Report.

Who receives the Crop Report?

Saskatchewan Agriculture's Crop Report has an extensive distribution list, including government, producers, agribusinesses, RMs, financial institutions and media. It provides the information necessary to keep on top of crop conditions and emerging issues, such as flood or drought conditions, insect infestations and harvest progress. A summary of the report, including maps, is also posted on the ministry's website.

How many volunteers are needed?

To provide the best service possible, the Crop Reporting Service strives to have at least one reporter in each RM in the province. The RMs listed below are currently not covered by crop reporters. If you would be interested in participating in the Crop Reporting Service, or know someone else who would, please contact Saskatchewan Agriculture. We welcome multiple reporters in all RMs, so please let us know if you are interested even if your RM is not on the list.

FOR MORE INFORMATION

- Call Saskatchewan Agriculture at (306) 787-5947 or e-mail terry.bedard@gov.sk.ca.

RMs needing Crop Reporters

4, 5, 6, 7, 8, 11,18, 19, 31, 32, 35, 37, 46, 63, 72, 74, 98, 100, 104, 128, 130, 133, 135, 136, 137, 152, 159, 162, 168, 171, 181, 214, 215, 217, 218, 223, 224, 225, 229, 244, 250, 253, 254, 256, 257, 260, 261, 274, 281, 290, 301, 303, 305, 310, 315, 316, 319, 322, 331, 333, 334, 335, 342, 349, 368, 394, 399, 401, 404, 426, 427, 434, 437, 439, 460, 461, 468, 469, 470, 471, 472, 490, 491

WHAT'S GOING ON IN AGRICULTURE? CHECK OUT OUR EVENT CALENDAR!

Today's busy lifestyle makes it hard to keep track of everything that is taking place. The Event Calendar on Saskatchewan Agriculture's website is a valuable tool to do just that. It is also an excellent place to advertise your upcoming agricultural seminars, workshops or field days.

This service is provided free of charge. You can enter your event through our website on an easy to use form. To access this form, click on the Event Calendar icon near the bottom right of our home page. It will take you to the Events page. On that page, you will find a button on the left side, right below the little calendar of the current month. Click on that button and the form page will open up. Just type in your information, hit submit and your information is automatically sent for review. Once it has been approved, your event will be added to the calendar.

All the events for the current month are listed on the main calendar page and more information is available by clicking on the event heading. You can also use the little calendar on the left of the page to view events for a specific day or month. Once an event has been entered, the date becomes coloured and bolded. Click on that day, and all of the events occurring on that day are listed with details and contact information. You can also use the drop down menu to view a whole month at a time.

An added bonus of the Event Calendar is the related documents function. This is where we can attach brochures, registration forms and agendas for your event. These documents can be downloaded by clicking on the icon or description in the shaded area at the bottom of the event details.

FOR MORE INFORMATION

- Call Saskatchewan Agriculture at 1-306-787-5170 or;
- E-mail agriview@gov.sk.ca.

Irrigation Scheduling and Potato Development

by Connie Achtymichuk, PAg
Provincial Vegetable Specialist
Crop Development Branch

Potatoes are one of the highest-value irrigation crops in Saskatchewan. They are shallow rooted and are, therefore, amenable to sprinkler irrigation on the Prairies.

Potatoes are more sensitive to moisture stress – too little moisture - than many crops.

Knowing the soil texture of the field is imperative. Potatoes grown on sandy soil will require more frequent doses of water than those grown on heavier soils.

Too little moisture during the growing season can result in reduced yields and small, misshapen tubers. Too much moisture could lead to erosion, increased disease susceptibility and leaching of fertilizer. Uneven moisture can result in tubers with many knobs or hollow centres.

Potato development is typically divided into five growth stages. Understanding the crop requirements at the different growth stages is important in order to maximize the yield and quality of marketable potatoes.

Stage 1 – Planting to emergence
During this stage, plants begin to emerge from the seed piece. Root formation begins, although the new plant receives nourishment from the seed piece. Irrigation is usually not necessary at this time, and in fact could be harmful if the water source is too cold. This stage lasts from 20 to 35 days depending on soil temperature, variety and cultural practices.

Stage 2 – Emergence to tuber initiation
Early vegetative growth occurs at this stage. Stolons, or underground stems, begin to develop. Available soil water (ASW) is being used by the plant to support the rapid growth. Additional moisture may be lost at this stage because this is the period during which the hilling operation is done.

Stage 3 – Tuberization
Small tubers begin to form at the end of the stolons. Adequate moisture at this stage is necessary to encourage a large number of tubers to set. It also helps to control the incidence of common scab on the potatoes.

Stage 4 – Bulking
At this stage, tubers enlarge very rapidly. Leaf area is also at a maximum resulting in maximum evapo-transpiration or water use. Growth and water use begin to slow down at the end of the bulking period.

Stage 5 - Maturity
The plants begin to lose leaves; photosynthesis slows. Tuber growth also slows and the skin begins to set. Excessive water at this time could cause the lenticels or pores on the potato to enlarge, providing a pathway for bacterial and fungal diseases such as pink rot or late blight to enter the tuber. Irrigating a few days before harvest, however, can help prevent bruising of potatoes by ensuring that sufficient volumes of soil are carried up the harvester chain, cushioning the potatoes.

FOR MORE INFORMATION

- Contact Connie Achtymichuk, Provincial Vegetable Specialist, at (306) 787-2755, or Garth Weiterman, Senior Agrologist, Agro-Environmental Services, Irrigation Development Branch at (306) 867-5528.

HOT OFF THE PRESS

Saskatchewan Agriculture is constantly updating the wealth of information it makes available to Saskatchewan residents. You can download the most current version of any document posted on our website. You can also call the Agriculture Knowledge Centre at 1-866-457-2377 to request a hard copy of many items. Below is a list of the latest documents posted, as well as the most frequently visited pages, on our website at: www.agriculture.gov.sk.ca.

Land Rental Arrangements - FAQs - The two most common types of lease arrangements are the crop share and cash lease arrangements. Visit: Management | Business Arrangements.

Cash Lease Agreement - This publication outlines some of the information and considerations of leasing privately owned land. Visit: Management | Business Arrangements.

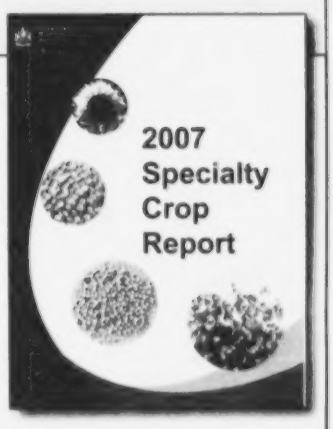
Business Development Guide - Provides business proponents, and those who work with them, with a tool to assist in the business development process. Visit: Development | Business Planning.

Fusarium Wilt of Canola: Variety Selection - FAQs - What is Fusarium wilt? Visit: Production | Crops-Disease.

What Producers are Receiving When They Buy Certified Seed – FAQs - What is meant by seed purity? Visit: Production | Crops-Seeding.

Custom Grazing Cattle - Custom grazing is an arrangement in which one person provides the pasture, water and grazing management expertise for another person's livestock. Visit: Management | Financial Planning.

On-Farm Food Safety – Since 1997, national producer organizations have been developing on-farm food safety programs. Visit: Food Safety | Monitoring.



2007 Speciality Crop Report - Statistics on a number of planning and decision factors that were involved with the planting of specialty crops in Saskatchewan. Visit: Statistics | Crops.

EVENTS CALENDAR

DATE	EVENT	LOCATION	PHONE	EMAIL
April 2-4	Saskatchewan Institute of Agrologists Conference and Annual Meeting	Saskatoon, SK	1-306-242-2606	www.sia.sk.ca
April 5	Beginner sheep shearing school	Saskatoon, SK	1-306-933-5200	www.sksheep.com
April 8	2008 Weed Inspector training clinics	Outlook, SK	1-306-787-4673	www.agriculture.gov.sk.ca
April 9	2008 Weed Inspector training clinics	Yorkton, SK	1-306-787-4673	www.agriculture.gov.sk.ca
April 10-11	Using herbicide in vegetation: Management for sustainable forest management	Saskatoon, SK	1-306-765-2840	info@saskforestcentre.ca
April 11-12	Saskatchewan Elk Breeders Association - 12th Annual Convention, trade show and general meeting	Saskatoon, SK	1-306-787-4623	www.agriculture.gov.sk.ca
April 16-17	Western Canadian Livestock Expo	Saskatoon, SK	1-306-931-7149	www.saskatoonex.com

AGRI-SOURCEFUL!

The **Agriculture Knowledge Centre** has the latest answers on topics ranging from crops and livestock to nutrient management and the economic implications of management decisions. A toll free line puts you in touch with specialists who draw expertise from around the province and beyond. We can help you find the solutions you need for you operation.

We also have nine **Regional Offices**. Each office provides access to expertise from specialists in the areas of agribusiness development, livestock, crops and forage. They can help build on opportunities for agriculturally based economic development in your region, and assist with the business development processes, technology and partnerships with the people and agencies you need to know to expand, change or start your business.

CALL US AT 1-866-457-2377 OR
VISIT WWW.AGRICULTURE.GOV.SK.CA